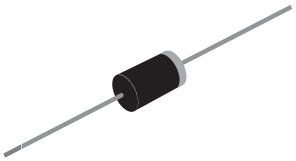
Ultrafast Plastic Rectifier



DO-201AD

FEATURES

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low switching losses, high efficiency
- High forward surge capability
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

RoHS COMPLIANT

TYPICAL APPLICATIONS

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	3.0 A
V_{RRM}	600 V
I_{FSM}	90 A
t_{rr}	30 ns
V_F	1.6 V
T_J max.	150 °C

MECHANICAL DATA

Case: DO-201AD

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum average forward rectified current, 0.375" (9.5 mm) lead length at T_L = 110 °C	$I_{F(AV)}$	3.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	90	A
Operating junction and storage temperature range	T_J, T_{STG}	- 40 to + 150	°C
Reverse avalanche energy (8/20 µs surge)	E_{AR}	10	mJ

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)				
PARAMETER	**TEST CONDITIONS**	**SYMBOL**	**VALUE**	**UNIT**
Minimum reverse breakdown voltage	10 µA	V_{BR}	600	V
Maximum instantaneous forward voltage (1)	3.0 A	V_F	1.6	V
Maximum DC reverse current at rated DC blocking voltage		I_R	20	µA
Maximum reverse recovery time	I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	t_{rr}	30	ns

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)			
PARAMETER	**SYMBOL**	**VALUE**	**UNIT**
Typical thermal resistance (1)	$R_{\theta JA}$ $R_{\theta JL}$	30 8.0	°C/W

Note:

(1) Pulse test: 300 µs pulse width, 1 % duty cycle

ORDERING INFORMATION (Example)				
PREFERRED P/N	**UNIT WEIGHT (g)**	**PREFERRED PACKAGE CODE**	**BASE QUANTITY**	**DELIVERY MODE**
31GF6-E3/54	1.13	54	1400	13" diameter paper tape and reel
31GF6-E3/73	1.13	73	1000	Ammo pack packaging

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

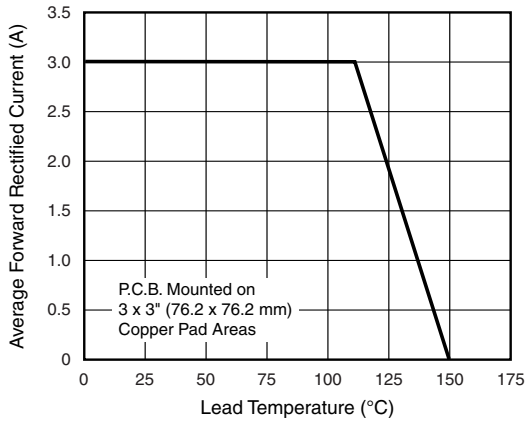


Figure 1. Maximum Forward Current Derating Curve

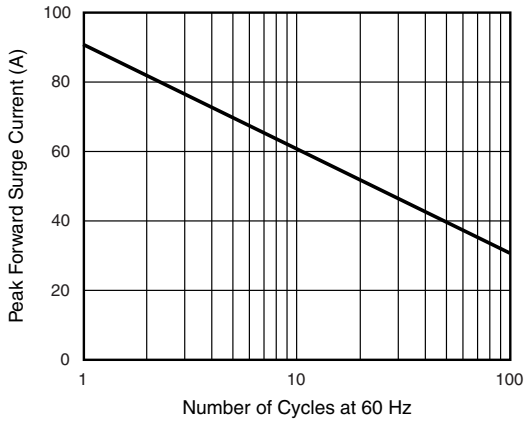


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

For technical questions within your region, please contact one of the following:
PDD-Americas@vishay.com, PDD-Asia@vishay.com, PDD-Europe@vishay.com

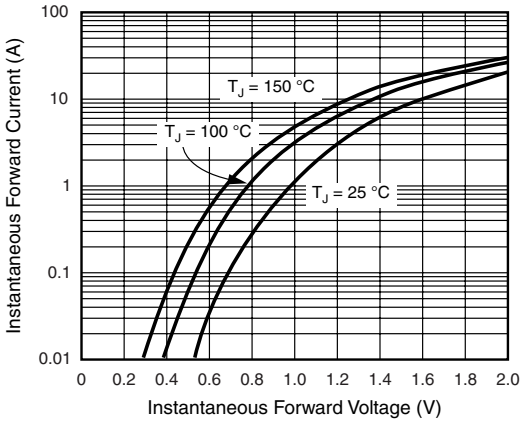


Figure 3. Typical Forward Voltage

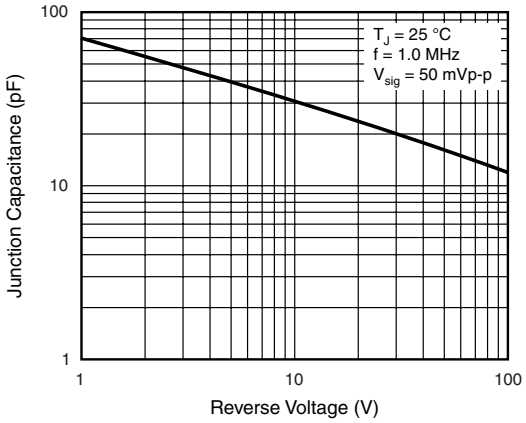


Figure 5. Typical Junction Capacitance

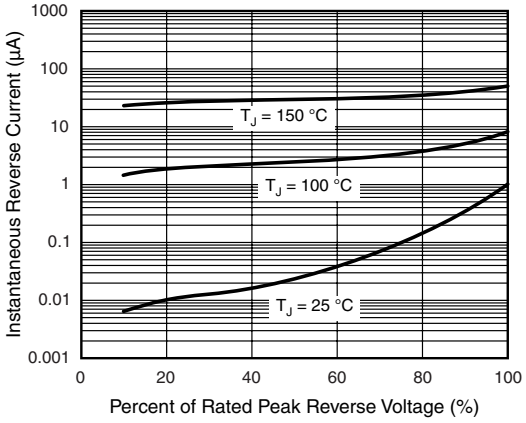
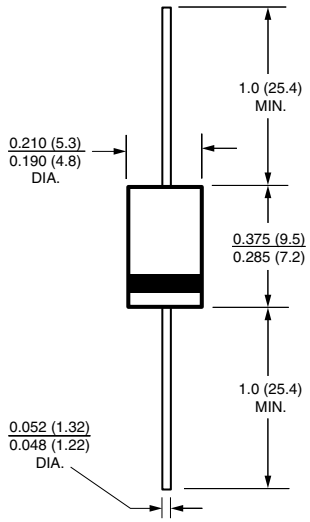


Figure 4. Typical Reverse Current

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-201AD



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